



Mr Duncan Burton, Chief Nursing Officer, NHS England
 Ms Sue Tranka, Chief Nursing Officer, NHS Wales
 Ms Anne Armstrong, Interim Chief Nursing Officer, NHS Scotland
 Ms Maria McIlgorm, Chief Nursing Officer, Northern Ireland

cc : See list below

22nd October 2024

We write as organisations charged with supporting the implementation of the four nations' IPC guidance for respiratory pathogens. The well-being of our members depends on the effectiveness of that guidance. In order to be effective it must be founded in good science and be unambiguous and comprehensible to those expected to implement it, which at present, the English, Scottish and Welsh NIPCMs are not. We should welcome your confirmation that the IPC manuals "are subject to continuous review based on the latest evidence on the whole range of infectious diseases." If such reassurance were true, this would be a factor in restoring the confidence which healthcare workers must have in national Infection Prevention and Control guidance. Sadly, this is not the case.

Failure to follow the science

We therefore write regarding the failure of current NIPCMs and the IPC guidance therein to take into account the latest science. A great deal of sound scientific evidence has recently been delivered to the UK Covid-19 Inquiry by experts in aspects of physics, bioaerosol transmission etc. Given the greater recognition of the airborne route and its mitigations, we are particularly alarmed to hear from your correspondence with Dr Evonne Curran NursD (copied below), that any "relevant learning" from the Covid-19 inquiry will only be incorporated after publication of the Inquiry's module 3 findings, which could be a year or more away. This is completely unacceptable and demonstrates that you have no intention whatsoever to honour your commitment to "continuously review the manuals based on the latest evidence". It is also an abrogation of your responsibility.

In that correspondence above, the Scottish NIPCM was quoted as follows: “Over time, acknowledgement of the multiple factors which influence transmission mode, alongside *clear inadequacy of the droplet/airborne dichotomy*, have indicated a requirement for reassessment of this framework.”(our italics) This is not the first time we have heard this as Professor Susan Hopkins said the same in a letter to CAPA 2 years ago (21 Oct 2022). We are unclear as to what changes to guidance have flowed from this recognition that the old dichotomy between droplet and aerosol transmission is no longer useful.

Furthermore, you stated in your response to Dr Curran, as you have in the past to others including CAPA and AGPA, that the IPC guidance is the result of reviews to identify the latest scientific evidence. This is clearly incorrect as the differentiation between droplets and aerosols has been known since 1934 to be 100 microns. Thus all the so-called droplets >5 microns described as being responsible for Covid-19 transmission (or other respiratory viruses) were, and are in fact, aerosols. As so clearly described by Prof Clive Beggs in his evidence to the Inquiry, this is a matter of physics, not opinion, and it was known to guidance-setting authorities as early as 14th April 2020 when the newly formed EMG reported as such to SAGE.

Governance and transparency

Evidence provided to the COVID-19 Inquiry confirms our longstanding confusion, also reflected in the HSIB report on nosocomial infection of COVID-19, that there is a lack of clarity over who is leading, writing and signing off the guidance. The guidance for England tells us about the intention to consult, but not the authorship, oversight and governance.

While the Inquiry findings may prompt future reviews, we request clarification on current governance arrangements, particularly concerning how adequately informed the guidance is by an appropriate range of independent and informed scientific knowledge and how the guidance has been reviewed to reflect the developing evidence on transmission routes for COVID-19.

As we write, the ONS figures for hospital acquired Covid-19 infections and deaths demonstrate that HCWs remain at risk on a daily basis when not performing AGPs. Consideration of how this is reflected in guidance reviews, e.g. as a result of new strains, would be welcome.

Infection Prevention and Control precautions should be by definition, precautionary. Where a precautionary approach is taken, the Regulatory Policy Committee (RPC) has outlined guidance on that approach. The IPC Cell previously noted in 2020, in the face of the pandemic a move away from “precautionary to pandemic” principles. Please will you confirm how those responsible for reviewing IPC guidance incorporate and use “high quality monitoring and evaluation plans” as specified by the RPC guidance. Bearing in mind the ongoing toll of Covid-19 on the public and HCWs, may we please have sight of the most recent documentation in which the latest monitoring and evaluation of the effectiveness of IPC guidance has been recorded. Guidance can only be as good as the outcomes it generates.

Rather than periodically writing to request such information or doing so via Freedom of Information requests, we would also ask for the regular publication of the deliberations of the reviewing body. This enables ongoing peer review in the broadest sense. We believe that this transparency is critical at this juncture to start recovering confidence in the IPC infrastructure within healthcare settings.

Legal considerations under Health & Safety law

Please clarify the relationship between the NIPC Manual and the duties of healthcare employers under the Health and Safety at Work etc Act 1974 and associated Regulations. The England manual mentions the need for employers to undertake COSHH risk assessments but does not address Regulation 6(1)(b) duties to implement actions necessary for adequate control. More critically, it does not refer directly to the duties under Regulation 7(3). This omission, in favour of the more vague reference to forthcoming guidance on the Hierarchy of Controls, is significant.

In default of the publication of specific guidance on meeting Regulation 7, then we cannot understand why reference should be made directly to the legal duty under COSHH. Indeed, is there a reason why the IPC guidance does not directly reference the relevant duties in COSHH in relation to biological agents, where it is referenced in relation to cleaning products? Would it not also be good practice to point out that there is an overriding legal duty to ensure compliance with COSHH so far as reasonably practicable, regardless of any good practice outlined in IPC guidance.

As you will be aware, Regulation 7 provides explicit compliance. It is helpful to expound it in healthcare settings, where there has been an ongoing misunderstanding of what the regulation requires in terms of a “rigorous application of the hierarchy of controls”.

“(3) Where it is not reasonably practicable to prevent exposure to a substance hazardous to health, the employer shall comply with his duty of control under paragraph (1) by applying protection measures appropriate to the activity and consistent with the risk assessment, including, in order of priority—

- (a) the design and use of appropriate work processes, systems and engineering controls and the provision and use of suitable work equipment and materials;
- (b) the control of exposure at source, including adequate ventilation systems and appropriate organisational measures; and
- (c) where adequate control of exposure cannot be achieved by other means, the provision of suitable personal protective equipment *in addition* to the measures required by sub-paragraphs (a) and (b).”

This would require, when addressing the management of the risk of infection through patient contact of a virus partly or predominantly spread by inhalable particles under 100 microns, consideration of RPE unless it can be demonstrated that infection of workers will be effectively prevented by other measures.

RPE is known to have a variability in effectiveness in workplace conditions. It is because of its variable effectiveness and the fact that when it fails, there is no further line of protection against exposure to hazardous substances that it is placed at the bottom of the hierarchy of controls.

This issue seems to be poorly understood in the IPC community and, judging by recent evidence provided to the UK Covid-19 Inquiry, by leaders within NHS and UK-HSA. The IPC guidance also needs to point out that while RPE with an assigned protection factor may not deliver that protection factor if incorrectly used (just as with most PPE), splash resistant RPE is capable of delivering protection from airborne pathogens, including droplets >100 microns as well as aerosols up to 100 microns capable of carrying pathogens over longer ranges as well as at close range.

Guidance on IPC should reflect current risks. Clearly, to the very top of the healthcare professions, there is a profound misunderstanding of the legal duties to protect workers from exposure to hazards, so far as reasonably practicable; the management of the hierarchy of controls in healthcare, including the additional use of PPE in any case where exposure cannot be prevented entirely by other means {Reg 7(3)(a) and 7(3)(b)}. This is, almost without exception, the case where close-range care is being provided to infectious patients since general room ventilation is insufficient to disperse the infectious plume around the patient and prevent it intermingling with the healthcare worker's breathing zone. Additionally, aside from any dispute about the nomenclature of particles, there needs to be more clarity on what particle sizes and behaviours PPE are *designed* to control, i.e. FFP3 all sizes and any inhalable and respirable particles.

IPC guidance needs to emphasise the duty of employers to ensure that the proper procurement, management and training required to deliver the protection levels designed into RPE is critical to bring healthcare up to the standards of compliance met by other industries, such as when dealing with legionella, silica dust and asbestos.

IPC guidance will never be satisfactory so long as it describes surgical masks as "Personal Protective Equipment" since these are devices primarily designed to protect the patient or another healthcare worker from potentially infectious materials emitted from the wearer's mouth or nose. The fact that FRSM type IIR masks have a fluid resistant surface does not prevent the wearer inhaling aerosols below 100 microns (or 'respiratory droplets' as they have otherwise been described in the past). To continue describing these masks as "PPE" not only leads wearers into a false sense of security, but flies in the face of [HSE guidance](#) and health and safety legislation. The time has come for IPC and other senior clinical leaders to respect the authority of the Health and Safety Executive and the law of the land which was put in place by the will of Parliament for the protection of workers over 50 years ago.

The fallacy that HCWs cannot wear RPE

There is a suggestion, heard for example in the COVID-19 inquiry, that healthcare workers are not able to benefit from the potential assigned protection factors that can be delivered by FFP3 masks. This undoubtedly is an issue that needs to be addressed through IPC guidance. Both male and female asbestos workers are required to wear FFP3 masks and are closely monitored for the effectiveness of the protection factor arising from exposure to particles in a similar range of sizes to infectious inhalable pathogens despite working long shifts undertaking heavy physical work.

Healthcare workers are capable and trusted to use complex medical devices. They should be able to achieve protection levels for themselves and patients which are achievable by people who are often semi-skilled manual workers. Indeed, staff working in ITUs and hot spots such as “red” wards during the pandemic did wear RPE to good effect in that their infection rates were significantly lower than for those working outside these areas as shown in the Ferris study from Cambridge.

No consideration appears to have been given to the fact that ITU staff were given clear advice to take precautions against an airborne pathogen whereas those outside ITUs and not performing AGPs were denied such information and told that transmission was only via so-called droplets (which were in fact aerosols as described above). With the correct information on transmission, why would HCWs in fear of their lives and long-term health conditions not be prepared to wear RPE? The absence of explicit and fundamental reference to the basic use of filtering face pieces therefore seems to be a result of poor IPC guidance and training.

We would also refer you to the experience of thousands of employees at Southampton University Health Trust where clinical and non-clinical staff wore powered air purifying respirators without any difficulties and will do so again in the event of another pandemic. The data on staff sickness and absence at the Hospital is evidence of both compliance and the effectiveness of RPE¹.

The fallacy that RPE is not effective

Confusion over the use and status of Fluid Resistant Surgical Masks (FRSM) also needs clarification. As highlighted above, FRSMs may have some protective value preventing against ballistic droplets and as source control to help achieve COSHH Regulation 7(3)(b) (e.g. when worn by patients or to prevent healthcare workers infecting patients). However, they do not provide respiratory protection because, even when worn properly, they are not designed, certified, tested or approved to filter out airborne infectious particles below 100 microns. This is evidenced by HSE’s own study RR619 from 2008 in which live virus was found on the inside of all FRSMs tested.

By comparison, FFP3 respirators achieve 99% exclusion of aerosol under laboratory conditions. The contention by some in the Inquiry that real world use of FFP3 respirators would not be as effective as in the laboratory is of course correct. That is why the standards applicable to these respirators specify “Assigned Protection Factors” (APF) rather than “Nominal Protection Factors” (NPF). APFs take account of respirators being worn under real world conditions. By way of example, an FFP3 respirator may have a NPF of 50 (the ratio of contaminant outside the respirator to that found inside) and an APF of 20 which will have been determined, based on empirical data and field studies on how well RPE performs in practice, rather than in laboratory conditions. Compared with an FFP3 respirator with an APF of 20, FRSMs do not have an NPF or APF assigned because they do not protect against this type of airborne hazard.

¹ “[Powered Respirators Are Effective, Sustainable, and Cost-Effective Personal Protective Equipment for SARS-CoV-2](#)”, A Munro et al, 14 Oct 2021

The effectiveness of RPE under real world conditions is demonstrated by the evidence from the Royal Society study² mentioned in detail by Prof Beggs in his evidence, and the latest paper by Prof Trisha Greenhalgh et al³ leaves no doubt that RPE is more protective than an FRSM when providing close range care or in poorly ventilated areas. This is the latest science. Why has it not been acted upon according to the assertion that IPC guidance follows the latest science?

The absurdity of the AGP list and local risk assessment

The latest science clearly indicates that normal respiratory events such as breathing, talking, shouting, singing, coughing and sneezing generate vast amounts of aerosol and that the aerosol fractions are the most significant carriers of the virus as described by Prof Beggs. The AGP list was never scientifically based on demonstration of aerosol production whereas it was accepted that coughing did produce aerosols. The AGP list is obsolete and not fit for purpose. Risk should be determined by situational exposure, not procedural exposure.

The lip service paid in IPC guidance to environmental risk assessments as opposed to the risk posed by an individual's personal characteristics still cannot be undertaken without a clear understanding of all the modes of transmission, no matter whether 'partially', 'wholly' or 'dominant' (to use some of the descriptors assigned by IPC Cell authors which led to further confusion and distrust in the IPC guidance).

The inconsistencies still extant in current NIPCMs and between the English NIPCM and the Scottish NIPCM (followed by Wales and Northern Ireland) make a mockery of following the science and renders any attempt by healthcare workers to interpret the guidance impossible. We pointed this out in [our letter](#) to CMO England, who passed it on to UK-HSA in 2022.

Thus the continued inclusion of the Table in Appendix 11 of both English and Scottish NIPCMs conflicts with much more permissive statements as in the footnote to the English guidance. To be clear, for COVID-19, the tables both continue to specify use of RPE (FFP3) when conducting procedures on the AGP list, with FRSM for "routine care". This flies in the face of the latest science. It is absurd that whilst the English NIPCM specifies FRSM for routine care of Covid-19 positive patients, the note which prefixes the table specifies that an FFP3 respirator must be worn by staff when caring for patients with a suspected or confirmed infection spread by the airborne route and SARS-CoV-2 is defined (within the table) as being transmissible by the airborne route as well as by droplets. The fact that it is airborne (to any extent) mandates the use of RPE according to COSHH regulations. The Scottish NIPCM purports to permit a more flexible interpretation of the guidance leading to greater use of RPE, but we know of many examples of this being ignored by IPC leads and managers with insistence on only FRSMs which are not and never have been PPE.

² [Effectiveness of face masks for reducing transmission of SARS-CoV-2: a rapid systematic review](#)

³ [Masks and respirators for prevention of respiratory infections : A state of the science review](#)

Conclusions

None of the requests here are anything other than what is in line with the ongoing duty to review and reflect the current state of knowledge. None of it requires the outcome of Module 3 reporting. The next pandemic may not be waiting that long.

We hope that we can expect the courtesy of a response which deals with the scientific points made in this letter rather than a platitudinous reply as given to Dr Curran.

Yours sincerely

[Redacted Signature]

Dr Barry Jones BSc MBBS MD FRCP
Chair of the Covid-19 Airborne Transmission Alliance

CATA

Covid Airborne Transmission Alliance

- British Association for Parenteral & Enteral Nutrition
- British Occupational Hygiene Society
- Royal College of Speech and Language Therapists
- Association for Respiratory Technology & Physiology
- British and Irish Association of Stroke Physicians
- British Society of Gastroenterology
- and specialist individual members
- College of Paramedics
- Queens Nursing Institute
- British Dietetic Association
- Doctors Association UK
- National Nurses' Nutrition Group
- Patient Safety Learning

CC :

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Dr. Andrew Goodall CBE, Permanent Secretary for Health and Social Services

Peter May, Permanent Secretary, Department of Health (N.I.) and HSC Chief Executive

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To: Dr Evonne Curran
Via email

27 September 2024

Dear Dr Curran,

Thank you for your letter dated 12 September 2024 to the Chief Nursing Officers of England, Wales and Scotland.

As CNOs for the UK, we want to assure you that the National Infection and Prevention Control (IPC) Manuals for England, Wales and Scotland are subject to continuous review based on the latest evidence on the whole range of infectious diseases.

As you have highlighted, the issue of IPC measures for Covid-19 are a central focus in module 3 of the UK Covid-19 Inquiry. A range of witnesses have already provided evidence to date and there have been a variety of perspectives concerning IPC interventions. We understand that the Inquiry will continue hearing from additional further witnesses over the coming months, some of whom may also address this issue.

The Inquiry will publish its Module 3 report in due course and we are committed to incorporating any relevant learning from the Inquiry into guidance.

Yours sincerely,

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